

December / January 1996

Volume 7, Number 1

PLAYBACK

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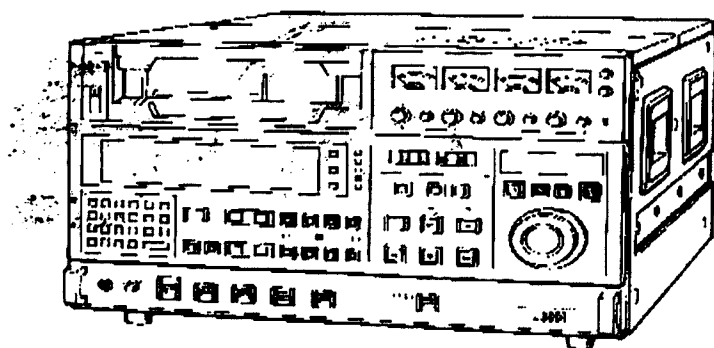
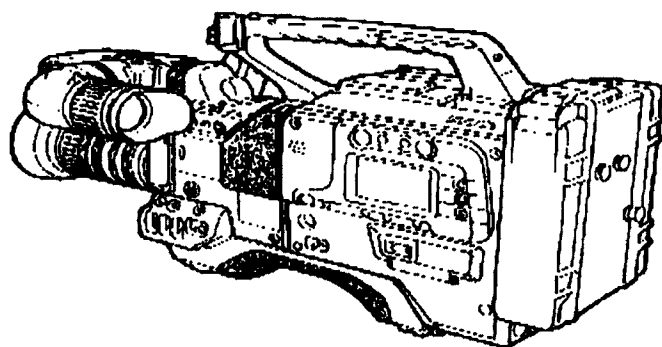
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Playback is a monthly newsletter published by the MII Users Association for the benefit of the members.

Executive Director David R. Gardy
Publications Editor Paul Allin

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The MII Users Association can be contacted at:

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Executive Commentary

JANUARY 1996

The State of Our Association

Happy New Year, everyone. As we enter a new year, I thought it would be appropriate to

bring the membership up to date on the state of our association. The next year will be a very important one for our group, as key decisions will be made to chart our course for the future. We will be inviting your input throughout the year and keep you informed about critical association issues.

First, let me thank all those who have provided input to me in recent months. Your suggestions are valued and always welcome and we try to implement as many as we can. As we enter the tenth year of the MII product cycle, I sense a restlessness in our membership. Many are curious as to how long the MII format will survive, and what will happen to our association as time passes.

The good news is that sales of new MII equipment have continued to be strong, even this late in the product cycle. There is also strong demand for used MII equipment, clearly evident in our "Trading Post" activity. A recent Post magazine survey revealed that the MII format as a percentage of market share



actually increased last year. All of these signs are a clear result of the competitive MII pricing, the inability of Sony's UVW Betacam SP product to become accepted in the market place, and the continued acknowledgment of MII's quality and durability among industry professionals. Many MII Users are reluctant to take the step into the digital or non-linear domains because their customers are happy the way things are. Many have integrated non-linear and digital products into their MII systems, taking advantage of MII production features which continue to please viewers and clients. These interim strategies are reflective of an industry itself, which has become so oversold on new video technologies that many professionals are just standing by to see what shakes out. But what's next for MII Users and our association?

In the association, we have created a unique entity in the industry. There is no other independent group as

actively involved in representing the user point of view in the user/m manufacturer relationship. In the past year we have become involved in representing our membership with manufacturers other than Panasonic.... a result of the inevitable integration of MII with other systems as technology advances. Many members value the strength we have in representing the collective needs of our group when issues arise that relate to the MII and other products. This month's survey is aimed at finding out how the membership wants us to proceed in this area. In the past many have indicated that the association's focus should be chiefly on II. But recently there's been indications that many members, (some who've seen the benefits from our collective representation, first hand), feel we should expand our group to include other technologies and products. The feeling is that this would extend our membership numbers, and strengthen the association. It would also insure that we had a revenue base to keep the association up and running through the latter years of the MII product cycle. This is critical if we're all to derive the highest return on our MII investment. Maintaining a database of user information, parts support, component availability and MII personnel expertise into the next century will be integral towards realizing our goals. Thus, consideration of extending the association's mandate without sacrificing our commitment to MII is in order to be sure we'll be around to do this. Your survey

Executive Commentary
continued from page 1

responses will be greatly appreciated. We will process and evaluate results in time for us to make a decision at our annual NAB Users meeting in April. Above all, new ideas and suggestions are needed.

Panasonic will have a role in this, also. I have had some conversations internally that indicate that Panasonic will continue to support our association. More importantly, they've had the foresight to realize that we are the largest organized loyal customer group and thus potential buyers of follow-on technology to MII. There is a willingness in Panasonic's upper management to consider offering incentives to members of our association to purchase DV and DVCPRO lines of equipment. Such a program would be in everyone's best interest and we are developing a proposal to bring such a plan to fruition. I think it should involve the design of "transitional configurations" that would allow MII Users to take advantage of the DV and DVCPRO features while still utilizing their existing MII technology. Details on this will be forthcoming in time for presentation at NAB.

Overall, the state of the association is like our industry..... in a state of flux. We are attempting to make ends meet with limited funds as always. We have endeavored not to raise membership fees, but not everyone has sent their dues in on time. The result is a cash flow hiccup that has forced us to do bi-monthly issues for the past two months. We will be going back to monthly issues in February and March, but we desperately need those who have not sent in their dues to do so immediately. All members should consider the prospect of advertising, also. Our rates are very reasonable and you might find some lucrative customers among our members.....all while helping the association.

1996 will be a very defining year for the MII Users Association of America.....one that I hope will also be happy, healthy and prosperous for all of our members. I look forward to hearing from all of you as we navigate the future and thank everyone for their continued support.



NOTICE

NEW TRADING POST POLICY

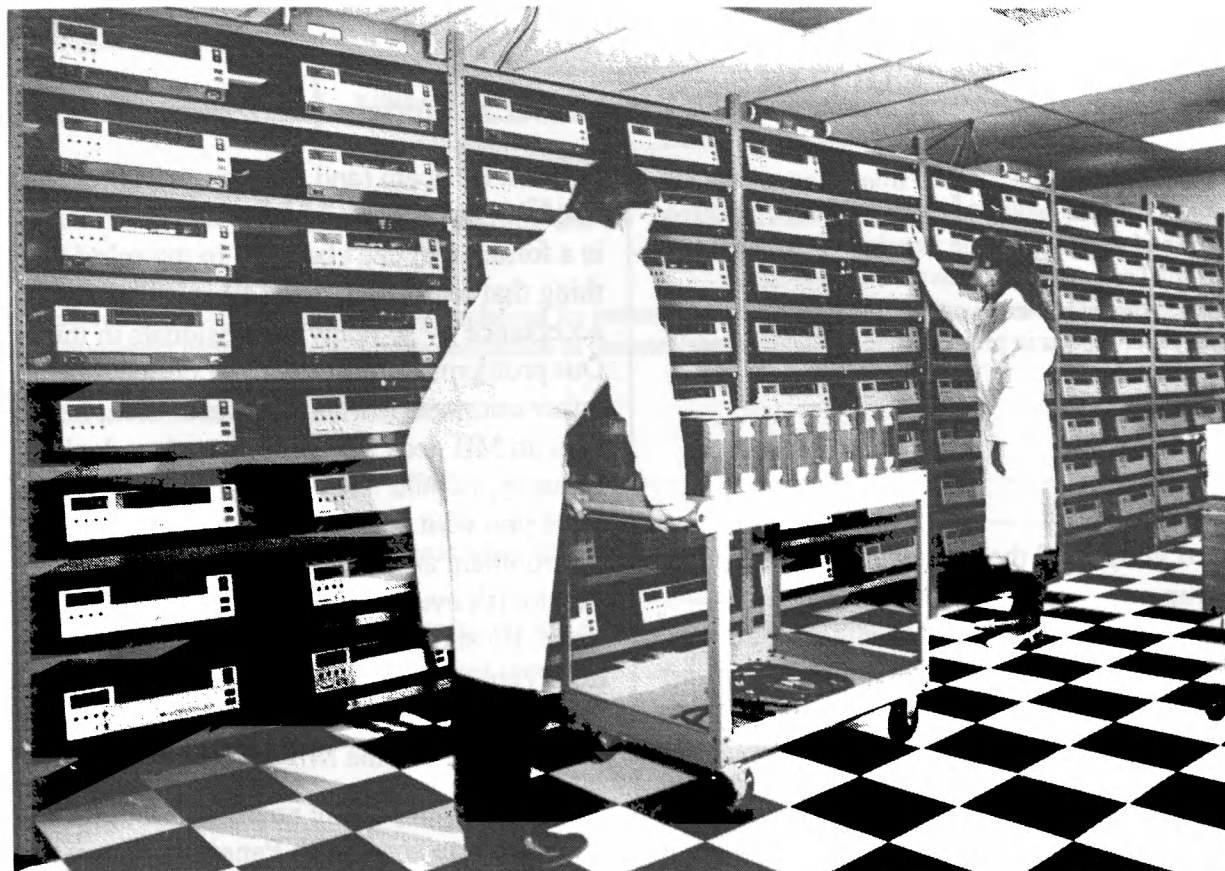
Trading Post classified ads will remain free to MII User Association members. However due to rising printing costs, we can no longer run these ads indefinitely.

Beginning next month, ads will be deleted after three months unless we receive a request for continuation. To continue your ad, simply mail or fax a copy of the Trading Post page with your ad circled. Write "reprint" in the

Have you returned your membership registration form and \$25.00 dues?

If you have not, please do so immediately!!!
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Association of America.* Return form (found on
page 2 of this newsletter) and payment to:

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LETTERS TO THE EDITOR

Note: The following letter resulted from efforts by the MII Users Association in facilitating communication between Panasonic and a member of the association, Dr. Ramirez, President of Technological Innovations, a research organization that has found a unique use for video -- replacing paper reports in presentations to communicate technical concepts.

Dear Mr. Gardy,

Attached you'll find the original letter that sparked all the fun and subsequent letters I faxed to Mueller and Eshbaugh at Panasonic after all was said and done. As I told you on the phone, I must thank you for your assistance. It was very clear from this incident that you or the MII Association (or both) wields a great deal of clout with the upper management of Panasonic. Within hours of talking with you I began getting calls from senior people in the Panasonic organization. Not only did I get calls from these guys, I also got a lot of genuine offers to help remedy any misunderstandings or problems that I'd encountered. Eshbaugh came by our office and stayed for hours answering questions. He also told us to call him directly if we ever had a problem in the future with regard to service. Interestingly, about a month later I did have the occasion to try out his offer. The phone number worked on the third ring, he was there, and spent fifteen minutes on the phone with me trying to resolve a problem I was having with an AU650. At the end of our conversation, he closed by saying "... call me if you need any more help. I'll be here for awhile ..." Mueller also followed up repeatedly (which I found amazing).

As I've told you on the phone, we've only been into MII for a year and a half but we consider it to be a tremendous find. Our clients are thrilled with the product we produce and could care less how we do it. As far as they know the only other time they've seen product like this is when it was

done on Betacam (and they know how expensive that is). On the basis of cost and performance this is a format that can't be beat. In my mind the only thing that really damages MII is its lack of acceptance by so many professionals in the field. Our problems don't come from our clients but rather our peers (virtually none of them have ever seen an MII deck but they know they don't like it). Actually, I could tell you stories that would likely drive you wild. We live in a very 'Sony Only' environment and it's hard to swim against the stream. It's even harder if you know you're doing it alone. By showing the kind of support I've seen from you, the MII Association and now Panasonic we don't feel so alone any more. Panasonic is fortunate to have the MII Association. Thank you.

As an aside, I have an off-the-wall idea you might want to share with Panasonic if you think it has any merit. When a company like ours goes off shopping for a 'Xerox' machine the reps will often lend you a machine for 30 days. I think the problem with MII is that you really have to see it and use it to believe it. I don't know what it would cost to do such a thing (nor how they would 'pre-qualify' people) but I think a number of people would fall in love with the units if they just had access to them for a brief time. We certainly did. Our local BMW dealer did that with us when we were trying to decide on a car. In essence they said take this for a week and then let us know what you think. After a week of driving it, my wife couldn't be without it. MII might easily work the same way. We're still amazed how great our picture looks.

Sincerely,

David G. Ramirez, Ph.D.

President,

Technological Innovations Inc.

**REMEMBER TO
PAY YOUR DUES!!
JUST \$25!!**

1996 UPDATED INFORMATION

MII Product Parts Retention Guideline

Panasonic has established the following guidelines for retention of MII product replacement parts. The retention period for replacement parts commences when production of complete units is discontinued

CATEGORY OF REPLACEMENT PARTS	RETENTION PERIOD
Printed materials and packaging materials	1 Year
Non-functional Parts..... (Applicable to the products of which production was discontinued before November, 1981)	5 Years
Non-functional Parts	7 Years
(Applicable to the products of which production was discontinued after December, 1981)	
Functional and electrical parts and integrated circuits.....	7 Years
Semi-conductors (except integrated circuits and cathode ray tubes).....	9 Years

Definition of Replacement Parts Categories

Printed Materials

Operation manuals and other printed materials.

Packaging Materials

Packaging materials necessary for products to be sold as new.

Non-functional Parts

Ornamental parts, except knobs and push buttons, which are not so vital to performance of product.

Functional Parts

Mechanical parts which are vital to performance of product.

Electrical Parts

Parts which work by electricity

DISCONTINUED (UPDATED)		CURRENT (As of Oct. 95)
<u>Model</u>	<u>Date Discontinued (UPDATED)</u>	
AU-630	Sep. 89	AU-W32R
AU-400	Sep. 89	AU-W33R
AU-500	Sep. 89	AU-W35R
AU-505	Nov. 93	AU-410/S
AU-520A	Sep. 93	AU-45H
AU-550	Sep. 89	AU-55H
AU-60	Sep. 90	AU-62H
AU-62	Sep. 92	AU-63H
AU-620	Sep. 89	AU-65H
AU-63	Sep. 93	AU-A950HD
AU-640	Sep. 89	AU-W32H
AU-65	Sep. 93	AU-W33H
AU-650	Sep. 88	AU-W35H
AU-660	Sep. 90	
AU-665	Aug 94	
AU-A950HD	Sep. 94	

The Association needs your 1995-1996 membership dues!!!!

This form and a \$25.00 fee are required to continue membership in the association and receive this monthly newsletter. Please don't hesitate. (Thanks to the many who have already sent in their membership fees!)

We have tried to make this form as simple as possible. Please take the time to fill it out now. We would appreciate it if you would take a few extra minutes to provide the information in the "optional" section so that we may better serve the association. This form and your \$25.00 dues must be returned *immediately*. ***Make checks payable to the MII Users Association of America. Return to: MII Users Association of America, c/o Gardy-McGrath (Int'l), Inc., 1950 Roland Clarke Place, Reston, VA 22091. Phone (703) 620-6000, fax (703) 620-0451.***

Membership Registration Form

Date: _____ Renewal: _____ New Member: _____

Contact Name: _____

Company Name: _____

Mailing Address: _____

Phone Number: _____ Fax Number: _____

Type of Business/Services: _____

Optional:

How did you hear about the association? _____

Check all that apply: Duplication facility (List additional formats below) _____ MII Rental Facility _____

MIU User _____ MII Owner _____ MII Dealer _____ MII Repair Center _____ Other _____

If you own MII, how long have you had it? _____

What model numbers? _____

If you do not own MII, are you planning to purchase?

Additional Comments/Equipment: _____

Check number: _____ Name on Check: _____ Date: _____

Check or Credit Card (VISA or MC only) Number: _____

Expiration Date: _____ Authorized Signature: _____

Dues cover the period from Sept. 1, 1995 through Sept. 1, 1996. Below is for office use only.

Received: _____ Membership List: _____ Mailing List: _____

1

Special Points of Interest (Attach additional pages if necessary.)

[illegible]

It is not necessary to use this form, as long as your submission is legible. If you have photos, you may send them too. They will not be returned.

Date Received

[illegible]



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AVID...One Year Later

.....The Second in a Series

Avid Responds

Last issue, we published an article that raised several issues regarding Avid support, especially as it related to a specific experience we had trying to incorporate the Alladin upgrade into our Avid system. Immediately after we sent Avid a transcript of the article, things began to happen. Our upgrade was installed by a regional service representative and the cost of this service was reduced from \$2,000 to \$895. To date it has worked fine.

Regarding our challenge to Avid management, we were pleased to receive the following letter from Avid management. Although we may not concur with everything in this letter, it's good to know they are listening. Next issue we will respond to this letter based on input from our Avid-owning members and others who read our initial article and have opinions of their own. Special thanks to Jim Regan, Amy Finn and Al Dasilva of Avid, who've responded to our inquiries. Stay tuned.

Dear Dave,

This letter is in response to your open questions directed to Avid Technology in a recent issue of MII Playback. I'd like to take this opportunity to address some of these concerns for you and your readers.

In the article, you raised some concerns about Avid's technical support response time, the level of training of our technical support representatives, the lack of local support from your dealer, and the price of Avid's SoftPak maintenance agreement. I'd like to address these issues one-by-one, beginning by letting you know some of the actions that Avid is taking to improve our technical support.

Technical Support Response Time

In order to serve our customers better and to reduce the wait time for our toll-free technical support service, Avid has recently added over two dozen new technical support representatives to our staff. These professionals are currently undergoing extensive training in order to begin taking calls by March. We have made modifications to our incoming telephone lines to accommodate more calls, and have also added pre-recorded technical notes that can be accessed while waiting on hold.

Technical Support Representative Training

All Avid technical support representatives go through an intensive ongoing training program that includes weekly, monthly, and quarterly seminars and product update

sessions. Even so, not every representative will have an immediate answer to your question. If a call continues for more than 15 minutes without resolution the problem is passed on to our multi-tiered Technical Support Escalation Team, who will work with you until the problem is resolved. In some cases, problem resolution may require Avid to dispatch a Field Support Technician to your facility.

Local Service and Support Through Avid Reseller

Local service and support is available through those Avid resellers who participate in Avid's Certified Support Representative Program. This program allows Avid to train and test qualified professionals to provide technical support for Avid products. All Avid resellers may elect to participate in this program -- you should check with your local reseller about their status.

Maintenance Pricing

The annual fee for SoftPak includes much more than just telephone support. In addition to unlimited toll-free telephone technical support from the hours of 7:30 AM - 2:00 AM, Eastern Time, the annual software maintenance fee includes free software updates, preferred pricing on replacement parts, access to Avid's electronic bulletin board service (Avid Online), and regular information updates. In the past year, Avid has released several major software updates for Media Composer (to our SoftPak maintenance customers -- that alone making the annual fee for software maintenance an excellent value).

So, to address your question, "after what we've been through, if you were in our place, would you buy Avid for the next two non-linear systems we currently need?", I must admit that I empathize with your frustrations due to the series of problems you've had with your Avid system. However, please understand that your concerns have been heard at every level of management at Avid. We are aware of the issues with our technical support and are committed to continually improving them and providing our customers with the highest possible level of support and service.

Thank you for the opportunity to respond to the readers of MII Playback. We sincerely hope that your next experience with Avid is a more positive one.

Best regards,
Amy Finn Director, Customer Services
Post Production Division

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Cinequipt St Paul, MN
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 VCR's, cameras, VW 565, WV 500 Marshall Hamm

Russell Video Svs. Inc. Ann Arbor, MI
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 Bob Russell

Video Management Systems
 Indianapolis, IN
 (317) 639-6163 Sony M7 Cam., AU 500 Portable MII Deck

Video Replay Chicago, IL
 (312) 467-0425 AU-66H

Vidcomp Distributors
 Houston, TX
 (713) 694-6400

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VidCom Vancouver, B.C.
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Association Membership

If you are not currently a member of the MII Users Association of America and are interested in joining. Please fax or mail us the following information: company name, contact persons name, mailing address, phone and fax numbers (if available), if you do or do not have MII and which machines (make & model) you have. We may be contacted at:

MII Users Association of America
c/o GMG International, Inc.

1950 Roland Clarke Pl., Suite 100
Reston, VA 22091

Or you may fax us at (703) 620-0451,
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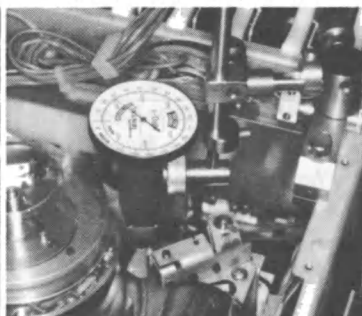
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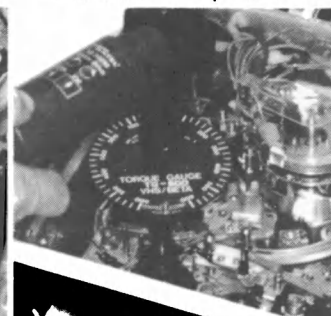
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Monthly Survey Questions

Please Respond! Thank you to those who responded to last month's survey.

Each month, the Users Association polls users on specific MII issues and publishes the results in the next newsletter.

Many members and non-members have indicated that they feel the association should assess the feasibility of extending our representation to owners of other video technologies, thus expanding our membership base and ensuring the association will be able to continue to grow and support MII users in the years ahead. This month's survey addresses this issue. It's extremely important that all members respond. Thank you.

1. If we could guarantee that the primary focus of our group would remain on MII users, should the MII Users Association extend its mandate to represent users of other video technologies to ensure future stability and growth of our association?

____ YES ____ NO IF NO, WHY NOT? _____

2. If so, what specific technologies should we consider?
(i.e. non-linear, other component formats, digital systems etc.)

3. If we pursued this approach and our staff grew to meet the needs of the new membership growth, how do you think the industry would react to the existence of such an established consumer advocacy entity representing the needs of professional video equipment users? Do you feel any existing organization fulfills that need presently?

4. As a member of the MII Users Association, would you be interested in special incentives from Panasonic to upgrade to DV / DV PRO systems? What about D-3 / D-5?

It is important for the membership that you respond to these questions, either by mail, phone or fax as soon as possible. Thank you for your input. 24-hour fax line (703) 620-0451 Phone (800) 9661030 or (703) 620-6000.

MII Users Association of America
c/o GMG (International), Inc.
1950 Roland Clarke Place, Suite 100
Reston, VA 22091

Optional
Name
Company



The KREGEL Report

Mark Kregel is owner of KTS Television & Film in Aberdeen, MD. He is a recent TV Production/Filmmaking graduate (Mass Communication) from Towson State University in Baltimore. During college, he completed internships at both Maryland Public Television and the Discovery Channel. He is currently building an MII edit suite for the production of TV broadcast documentaries.

MII 1996 A Technical Perspective

Ten or fifteen years ago, the realm of broadcast video production was ruled by traditional linear edit suites costing hundreds of thousands of dollars operated by a "few" select and key people. Currently, with the evolution of computer based (desktop and/or nonlinear) editing systems, access to higher end video is expanding rapidly (costs falling equally as quickly), and in a few years it appears that basically anyone with a personal computer will be able to process video in some form or another. We presently stand at a great transition period in this process. Long established video practices and procedural techniques are falling, and a new army of literate videographers are rising right out of the everyday public putting together production systems for a fraction of the cost of previous systems. For those currently considering purchasing, upgrading, building or rebuilding a video production facility or editing system, the choices have never been so many. There is now digital tape, digital disk, analog tape, traditional linear editing, nonlinear disk based editing, desktop, etc., with basically unlimited assembly possibilities blossoming out of this mix. Where does the MII format stand in this mix for both new and used equipment? Should analog tape necessarily be ruled out in favor of the newer digital tape formats? Should tape even be ruled out completely in favor of all disk systems? As a quick response to these questions I would cite the continued sales of SVHS, BetaCamSP and the MII format. Additionally, I would cite that for their signal quality, these formats will continue to offer extremely respectable performance for years to come (often at a fraction of the

cost of comparable digital tape formats). Where does MII fit into contemporary purchasing decisions? Since it is the new year, let's take a new updated look at this question.

To begin this discussion, I want to refresh a few general facts relevant to this topic. To start with, nonlinear editing is nothing new. The first commercial nonlinear (disk storage based) system was actually built sometime around 1970. The system was big and expensive for its day, but it was still nonlinear. Digital tape is also nothing new. How long has D1 been around for example? What about the use of the term "digital video"? In response to the term "digital video" I would ask how long DVEs (digital video effects devices) have been around, or how long TBCs (time base correctors) have been around. Both of these devices are fundamentally digital by nature. The revolution that is taking place today in video is not so much the influx of the basic concept of digital video (which has been around for decades), but the evolution of the desktop computer in relation to video production. It is common these days for nonlinear manufacturers to picture their systems nicely packaged in a rack mount or on a table. However, there is often a common omission and/or oversight in these ads. That omission is some means to feed video to and from the system (usually mentioned in the fine print as a VTR or tape deck). The gap between traditional format VTRs and the newer editing systems is often not as wide as it might seem. And it is the prudent consumer who can maximize the best of both worlds during this period of transition.

From an overall video production standpoint, video work can be broken down into three broad categories. These categories are acquisition, editing and distribution. Traditionally, acquisition is done with a camera. However, computer based graphics and animation programs are continuing to make inroads into this creative process as evidenced by such works as the movie Toy Story. Editing of course is manipulating your raw video into a finished product and is perhaps the area of greatest evolution in recent years. Tradition linear editing is still a force to be reckoned with especially in terms of bulk signal flow, however, nonlinear clearly seems to be the shape of the future. And finally, you have distribution. Distribution might take the form of a VHS copy of your work to be played on a consumer VCR all the way to your work being seen nationally on cable or broadcast television.

From a technical standpoint, a common theme that runs through all of these steps is signal storage. In terms of storage, there are some new emerging technologies such as optical disk and the ever expanding realm of CDROMs. However, currently the two real work horse storage technologies for video production are magnetic tape (analog or digital) and magnetic disk (such as hard disk systems). It may be surprising to some, but the actual physical processes at work in both magnetic tape and magnetic disk storage systems are

basically identical. Both use comparable types of magnetic media in their surfaces, and both use physically similar read/write heads in terms of head gap design and head construction. Disk storage is not somehow magically superior to tape storage except that it offers much more instantaneous access times to data. Some other general characteristics related to tape and disk storage are as follows. Once a hard disk package is assembled, its storage size is then basically built in. You cannot run an infinite amount of magnetic media through a disk assembly such as you can with a VTR. Disk storage is therefore relatively more expensive on a unit basis than tape and as such it must be rationed much more carefully. Such is the birth of compression schemes for hard disk based video systems.

Another colorful illustration comparing tape to disk storage is as follows. If you take an MII 60 minute cassette (M60S) and yank the tape out of the cassette, you will find over 780 feet of 1/2 inch tape in that cassette (based on the MII tape speed of 67.693 mm per second). If you then cut this tape into strips and lay these strips side by side, you will find an incredible 32 square feet of storage media surface area in that cassette. As amazing as it seems, that's the equivalent surface area of a 4 by 8 foot piece of plywood (see footnote 1). An average hard disk by comparison may have 8 two-sided disks each 4 inches in diameter. The square foot storage area of this package is a mere 1.4 square feet. It is true that overall hard disks will store data at slightly greater densities than say a tape based system such as BetaCamSP or MII. However the surface area ratios (and hence the storage capacity potentials) are still extremely disproportionate. Yet another illustration of this difference between tape and disk is as follows. A D-5 VTR puts out a digital signal something on the order of 33 to 37 MByte per second (270 to 300 Mbit/sec). MII is analog at the tape which does not directly translate into digital numbers (without specific quantizing values), however, the digital TBCs in MII studio VTRs are probably actually throughputting on the order of 27 to 30 MByte/sec. The NTSC digital broadcast standards (such as CCIR-601) also fall into this 27 to 30 MByte/sec range (see footnote 2). On the other hand, most nonlinear hard disk based systems today due to bus limitations are putting out only on the average of say 5 to 15 MByte/sec. Computer processing and storage capabilities are growing rapidly on a daily basis. However, the signal requirements of high end video are immense. Hard disk systems still have a long way to go to catch up to the raw signal throughput of a traditional broadcast quality editing suite (MII, BetaCamSP, 1", or D-1 through D-5). Again, such is the need for compression for the nonlinear type system.

How does all this talk of storage tie into our previously mentioned production steps of acquisition, editing and distribution? Let's look first at acquisition and ask "tape or

disk"? To begin, let's look at the number of commercially tape/camera acquisition systems currently available. Considering the number of existing tape formats and the large number of existing camera systems that can be docked or cabled to various format VTRs, the number of available tape acquisition combinations probably orders in the hundreds. How many disk acquisition systems are currently available that allow true field mobility? To my knowledge there is only one marketed and one currently in sight (the Avid/Ikegami CamCutter). Most every other major equipment manufacturer is putting his/her money on tape for acquisition for the near and medium term future. For acquisition it is just hard to compare a BetaSP or MII 20, 30, or 60 minute tape costing \$20 and up with a several hundred or thousand dollar hard disk that may only offer 5 minutes of storage at the same signal quality level.

Now how about editing and the question "tape or disk"? We have already touched upon this to some extent but there is still more to be said here. As a preface to this, I must state that up until just recently, I have in fact been a die hard traditional linear editing proponent. I am obsessed with maximum signal quality in my work (hence the use of MII), and up until now nonlinear systems overall just haven't had the throughput to begin to compare with a good linear deck based system. However, with the speed and flow increases that are now continually taking place in desktop computer systems, it seems that cost effective nonlinear editing systems that are actually "broadcast quality" are in fact soon to become plentiful. The ability to visually mold an edit timeline, to not have to go down a generation to B roll, to preview quickly and to be able to see and manipulate your audio channels are benefits of a good nonlinear system that simply cannot be ignored. Tape or disk for editing? At this time, take your pick.

Finally, how do distribution and archiving tie into the question of tape or disk?. To probe this let's pose yet another series of questions and answers. (Q) What is the current ration in homes of VHS tape machines to disk playback machines for television? (A) Perhaps a few million to one. (Q) What is the ratio in TV broadcast and cable stations of video tape machines (VTRs) to disk playback machines (such as servers)? (A) Perhaps a thousand to one. (Q) And after your video is assembled and distributed (by whatever means), if you wish to store both raw and finished video for say perhaps a year or two, do you take a \$2000 dollar hard disk copy of your material and put it on a back shelf? (A) For at least the next several years in disk technology, you probably wouldn't want to do this. As in acquisition, distribution is another broad category of video production that at this time is still almost totally ruled by tape.

What's our running tally on the last few paragraphs?

Kregel - continued on page 21

News from...

PANASONIC

PANASONIC MAKES \$6000,000 EQUIPMENT DONATION TO THE MUSEUM OF

SECAUCUS, NJ (November 1995) - Panasonic Broadcast & Television Systems Company (PBTSC) has made a large-scale donation of video equipment to The Museum of Television & Radio in New York City that will allow the institution to duplicate its extensive collection for its new West Coast facility in Los Angeles with no decrees in program quality.

The Museum of Television & Radio is a nonprofit organization founded by William S. Paley in 1975 to collect and preserve television and radio programs and to make these programs available to the public. Since opening its doors in 1976, the Museum has expanded the collection include more than 75,000 programs chosen for their artistic, cultural and historical significance. The collection covers more than 70 years of television and radio history.

The New York facility, designed by Philip Johnson, is

located in the William S. Paley Building, 25 West 52 Street in Manhattan. On March 18, 1996, the Museum will open a second institution at 465 North Beverly Drive, Beverly Hills that will bring the Museum's vast resources to the public and creative community in California on a permanent basis. The West Coast facility, designed by Richard Meier, will be equipped with state-of-the-art audio/visual technologies for preserving and displaying its collection, similar to those in New York.

The Panasonic donation includes ten AJ-D350 D-3 digital composite video tape recorders, twelve FT-2700 27-inch color video monitors, RAMSA audio mixing consoles, power amps and condenser microphones, and two 51-inch Panasonic consumer projection televisions.

"The Museum is very grateful to Panasonic for this large donation", said Robert M. Batscha, the Museum's President. "State-of-the-art technology has transformed the way we present our collection to the public. Using Panasonic's D-3 equipment in our current effort to duplicate the New York archives not only greatly aids us in our preservation efforts, but also means visitors to our California Museum will have access to the entire collection, in the finest condition possible."



Panasonic Broadcast & Television Systems Company has made a \$600,000 equipment donation to the Museum of Television & Radio that will allow the institution to duplicate its extensive collection for its new West Coast facility. Above left, Richard Strabel, general manager, Panasonic's Entertainment Systems Division, and, right, Robert M. Batscha, Museum President.

David Greenstein, Vice President of Administration & Planning, explained that after the Museum deploys AJ-D350 D-3 VTRs to dub programming in New York, half the equipment will be dispatched to Beverly Hills. The FT-2700 color monitors will be used for display purposes throughout the California facility. "On the West Coast, the D-3 VTRs will be used to screen programs in the Museum theaters. D-3 will be the primary playback format, with AJ-D350's installed in the master control rooms at both Museums to transmit material to the theaters and screening rooms," said Greenstein.

BRISTOL PRODUCTIONS RECIEVES AWARDS FOR CHILDREN'S VIDEO

Bristol Productions Limited of Olympia Washington has just received regional and national awards for their production The Adventures of Little Drip. The video received a Silver Award of Merit at the Emerald City Awards and a Certificate of Merit at the International Communication Film and Video festival in Chicago.

The Adventures of Little Drip is the story of a little boy who meets a rain drop that has fallen off his water cycle (which is much different than a motorcycle) and is trying to get back to the ground water. During their adventures the boy learns what ground water is, where it comes from, and how we can damage it if we are not careful. The presentation combines animation with live action to create a fast-paced video for children in grades K-3. The video is being distributed nationally to various schools, libraries, and environmental groups.

The show was written and produced by Karl G. Schmidt. Ken P. Gaer was responsible for cel animation, rotoscoping, and blue screen post production. The show was shot on location in Washington State using the MII videotape format, and posted in Bristol's Olympia, Washington MII edit suite.

Bristol Productions Limited is an international video production company. Bristol crews have been seen in London, Tokyo, Quebec, and across the US. For further information contact Karl G. Schmidt: phone (360) 754-4260, FAX (360) 754-4240, Email Vdboy11@GNN.COM.

CINE MAGNETICS VIDEO ACQUIRES MII MACHINE

Cine Magnetix Video, an industry leader in video duplication, packaging and fulfillment based in Armonk, New York, has announced the purchase of a Panasonic MII playback machine for clients mastering on this format.

The purchase of this equipment was prompted by many inquires from clients using MII who need quality duplication from MII but have been forced to bump up or transfer to other formats. The addition of this equipment adds to our already wide variety of playback and mastering options which include D-2, 1", Betacam, Digital Betacam, 3/4", 8mm, Hi-8, and Super VHS.

Along with duplication, Cine Magnetix is complemented with support services that include anti-piracy encoding (Macrovision), custom labeling, packaging and printing, as well as complete distribution services which include 800 number inbound order capturing.

For additional information, please contact Tony Quaranti at (914) 273-7530 or toll free (outside New York state) 1 800 431-1102.

PANASONIC INTRODUCES NEW ULTRA-COMPACT CAMCORDER

SECAUCUS, NJ (December 1995) - Panasonic Broadcast & Television Systems Company (PBTSC) announced the introduction of AG-EZ1U DV-Cam, a Digital Video (DV) format 3-CCD digital signal processing camcorder that weighs less than 2.4 pounds. The ideal digital camcorder for stringers, cable television news and local events coverage, as well as event videographers and multimedia producers, the AG-EZ1U will record one hour of digital component video on a miniature DAT-sized 1/4-inch (6.35mm) cassette. The hand-held camcorder features three 1/3-inch IT CCDs to produce 500 lines of horizontal resolution, a signal-to-noise-ratio 54dB, minimum illumination of 5 lux and draws only 7.5 watts of power. Tapes recorded in the DV format can be

played by DVCPRO studio VTRs with the optional AJ-CS750 adapter, facilitating the use of DV footage in professional applications.

The AG-EZ1U is remarkably smaller than other professional digital camcorders and provides dramatically better video quality than analog camcorders," said Steven Bonica, President PBTSC. "Once users realize the AG-EZ1U's 'breakthrough' price / performance benefits, a new audience of end users will begin enjoying the advantages of digital image acquisition".

AG-EZ1U Digital Video for the Field and Desktop

In Digital recording, the analog video signals are converted to exact binary numbers, processed and recorded, eliminating analog distortions and noise. Once in the digital domain, the video signal can be viewed, edited and manipulated by digital equipment like personal computers, and even transmitted via digital telephone lines. Digital recording affords two key benefits vs. analog -- its transparent signal doesn't degrade through successive generations, and it offers an easy interface with other emerging digital technologies, such as nonlinear editing, video-on-demand, and HDTV.

The DV camcorder records component digital video to assure high image quality and uses 5.1 intra-frame compression to prevent motion artifacts. The result is cost-effective, standardized full-motion digital video, with superb pictures that rival or surpass Betacam-SP quality, as well as 16-bit CD Pulse Code Modulation (PCM) audio.

The AG-EZ1U has a high-performance, high-precision mechanism that records advanced metal-evaporated tape (7-microns thick, 1/4-inch wide) for professional-quality recordings.

The camcorder features a large, adjustable 180,000-pixel color viewfinder, digital electronic stabilization; a 10:1 optical and 20x digital electronic zoom (adjustable in four speeds -- 3.5 seconds to 15 seconds); built in SMPTE time code generator; three-dimensional digital noise reduction; a 14-step electronic shutter (1/60th sec. to 1/8,000

sec.) to record fast-moving subjects; 4-step (+3/ +6/ +9/ +12dB) manual gain-up; 16:9 wide aspect ratio recording capability; y/C and composite outputs; auto white balance and black balance; 5-pin control; and stereo audio output. A stereo microphone is built in, and AG-EZ1U accepts external microphones. The DV camcorder uses a newly-developed metal evaporated tape, available in 30-minute and 60-minute lengths.

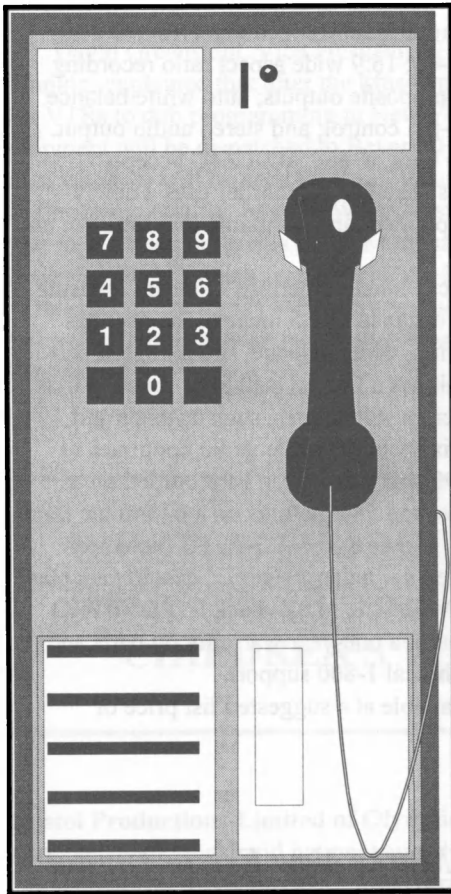
The camcorder's Macro function permits close-up focusing down to a minimum distance of 1.5 inches. The user has manual control over iris, white balance, shutter speed and backlighting. The unit has a Digital Still Shot function that allows recording of crisp still images, such as maps and graphics, for about six seconds, while audio continues as normal. A total of 290 still images can be recorded on a single 30-minute tape, and 580 pictures on a 63 minute tape. Professional features unique to the AG-EZ1U include an external 7.2 volt batter; car battery charger, cassette adapter that allows a mini DV cassette to playback in a DVCPRO VTR, soft carrying case; a one-year warranty on parts and labor, and expert technical 1-800 support.

The AG-EZ1U is available at a suggested list price of \$4,500.

AG-EZ1U Marks New Era in Digital Image Acquisition



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This set of three 30 minute videos feature preventive maintenance, troubleshooting, applications overview, upper drum replacement, and basic service procedures. Specifically, items covered include the following:

(I.) PANASONIC MII EQUIPMENT TRAINING-LESSON I

RECOMMENDED CLEANING AND MAINTENANCE PROCEDURE

Sections-

- 1.0 - Upper Drum
- 2.0 - AC Head Stack
- 3.0 - Field Cleaning the Portable Unit
- 4.0 - Tape Path
- 5.0 - Cleaning the Pinch Roller
- 6.0 - Cleaning the Capstan
- 7.0 - Cleaning the Posts
- 8.0 - Cleaning the Fixed Posts
- 9.0 - Brush Assembly
- 10.0 - Cleaning the Earthing Assembly
- 11.0 - Final Disassembly and Cleaning
- 12.0 - Emergency Tape Unloading Procedures
- (+ Conclusion)

(III.) LESSON 3 APPLICATIONS AND OVERVIEW

(Including basic troubleshooting)

Sections-

- 1.0 - Introduction
- 2.0 - Stand Alone Single Machine Configuration
- 3.0 - Machine to Machine (cuts only applications)
- 4.0 - A/B Roll Editing Systems
- 5.0 - MII Menu and Setting Instruction

(II.) LESSON 2 UPPER DRUM REPLACEMENT AND ELECTRICAL ALIGNMENT

Sections-

- 1.0 - Cleaner Roller Removal
- 2.0 - Mounting of Fixing Plate for Tip Protrusion Gauge
- 3.0 - Video Head Tip Protrusion for Measurement
- 4.0 - Removal of Upper Drum Assembly
- 5.0 - Upper Drum Re-assembly
- 6.0 - Eccentricity Gauge Adjustment
- 7.0 - Simplified At "x" Valve Adjustment



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Authorized Panasonic Dealers/Repair Centers

The following is a current list of authorized Panasonic Dealers Who have sponsored the MII Users Association with contributions of \$250.00 We appreciate their support and urge all users to support

Northeastern

Advanced Video Systems
19 Roots Lane
Owego, NY 13827
(607) 687-0545

Alleghney Electronics, Inc.
800 Chestnut Ave.
Altoona, PA 16601
(814) 946-0871

Colortone Camera, Inc.
76 S. Central Ave., Rte. 9A
Eimsford, NY 10523
(914) 592-4151

Communications Televideo
9301 Georgia Ave.
Silver Spring, MD 20910
(301) 585-6311

Crimson Camera Tech Sales
325 Vassar St.
Cambridge, MA 02139
(617) 868-5150

DSI Video Systems, Inc.
627 Boulevard
Kenilworth, NJ 07033
(908) 245-4833

Eastern Video Systems, Inc.
2 Sterling Rd.
Billerica, MA 01862
(508) 667-0009

High Fidelity House, Inc.
1001 Sussex Blvd.
Broomall, PA 19008
(215) 544-4420

Washinton Professional
Systems, Inc.
11242 Grandview Ave.
Wheaton, MD 20002
(301) 942-6800

Quail Video Productions
924 Penn Ave.
Pittsburgh, PA 15221
(412) 243-1300

R.P.C. Video, Inc.
384 Route 909
Verona, PA 15147
(412) 243-1300

Seneca Communications Inc.
1321 Dunbar Ave.
Dunbar, WV 25064
(304) 766-8740

Specialized
Communications
907 Maryland Ave.
Hagerstown, MD 21740
(301) 790-0103

Tri-State Video Services,
Inc.
1379 Pittsburgh Rd.
Valencia, PA 16059
(412) 878-1630

Videoplay Industries, Inc.
RT30 Tolland Ind. Park
Tolland, CT 06084
(203) 872-9195

Midwest

Alpha Video & Audio, Inc.
7711 Computer Ave
Edina, MN 55435
(612) 896-9898

Avonix Video Ayatems,
Inc.
3495 N 124th St.
Brookfield, WI 53005
(414) 783-6050

B&J Photo, Inc.
525 North Main St.
Findley, OH 45040
(419) 424-0903

Beatty TeleVisual, Inc.
1287 Wabash Ave.
Springfield, IL 62704
(217) 787-4855

Communications System
Group
13355 Capitol Ave.
Oak Park, MI 48237
(810) 399-2000

Full Compass Systems, Inc.
5618 Odana Rd.
Madison, WI 53719
(608) 271-1100

Industrial Broadcast
Services
5436 W. Mingo, Suite F
Tulsa, OK 74146
(918) 663-5126

Industrial Video, Inc.
1601 N. Ridge Rd.
Lorain, OH 44055
(216) 277-1218

Klaus Radio, Inc.
8400 N. Allen Rd.
Peoria, IL 61615
(309) 691-4840

Lines Music Company
219 S. Jefferson
Springfield, MO 65806
(417) 862-5533

Modern Communications, Inc.
1733 Larkin WMS Rd.
St. Louis, MO 63126
(314) 343-0800

Pratt Audio Visual/Video
Corp.
200 Third Ave., SW
Cedar Rapids, IA 52404
(319) 363-8144

Professional Video Supply
9300 W. 87th Terrace
Overland Park, KS 66212
(910) 642-5528

Swiderski Electronics
1200 Greenleaf Ave.
Elk Grove Village, IL 60007
(708) 364-1900

TV & Video Service (KEY)
14121 "S" St.
Omaha, NE 68137
(402) 895-3100

Thalner Electronics Labs, Inc.
7235 Jackson Rd.
Ann Arbor, MI 48103
(313) 761-4506

Todd Communications
6545 Cecilia Circle
Minneapolis, MN 55435
(612) 941-0556

West

Accent Audio-Video
13616 Neutron Rd.
Dallas, TX 75244
(214) 458-0501

Audio Visual Supply, Inc.
4575 Ruffner St.
San Diego, CA 92111
(619) 565-1101

E.C.I Video
2809 Ross Ave.
Dallas, TX 75201
(214) 969-6946

Electronic Design &
Service
6922 San Fernando Rd.
Glendale, CA 91201
(818) 843-6199

Industrial Broadcast
Services
5436 W. Mingo, Suite F
Tulsa, OK 74146
(918) 663-5126

IVS
7925 Auburn Blvd.
Citrus Heights, CA 95610
(916) 725-6600

Lubbock Audio Visual Co.,
Inc.
2120 Avenue Q
Lubbock, TX 79411
(806) 744-2559

Metrovonic, Inc.
3808 Catlina Ct.
Los Alamitos, CA 90720
(714) 827-4580

PCI, Inc.
1595 West Amador, Suite
H
Las Cruces, NM 88005
(505) 523-7788

Professional Video &
Tape, Inc.
10240 SW Nimbus, Suite
L11
Tigard, OR 97223
(800) 833-4801

Studio Spectrum, Inc.
1056 N. Lake St.
Burbank, CA 91502
(808) 843-1610

Troxwell Communications
4030 South 38th St.
Phoenix, AZ 85040
(602) 437-7240

Tulsa Electronic Systems,
Inc.
4727A So. Memorial
Tulsa, OK 74145
1-800-322-9220

TV Specialists, Inc./Video
180 East 2100 South, Suite 104
Salt Lake City, UT 84115
(801) 486-7555

Video Store, Inc.
2601 McHale Ct. #140
Austin, TX 78758
(512) 837-2000

Video Technical Services, Inc.
222 Truman NC
Albuquerque, NM 87108
(505) 265-4045

Vidicomp Distributors Inc.
232 W. 38th St.
Houston, TX 77018
(713) 694-6400

Waterford Group (The)
307 Orchard City Dr. Ste. 102
Campbell, CA 95008
(408) 374-8550

Southern

Allied Communications Corp.
1650 Elm Hill Pike, Suite 1
Nashville, TN 37210
(615) 391-5500

AVEC Electronic Corporation
2002 Staples Mill Rd.
Richmond, VA 23230
(804) 359-6071

Custom Supply, Inc.
2509 5th Ave. South
Birmingham, AL 35233
(205) 252-0141

Delta Electronics
dba Delta Media Systems
1406 Terry Rd.
Jackson, MS 39204
(601) 969-2929

Electric Image Media Systems
3409 NW 9th Ave. Ste 1104
Ft. Lauderdale, FL 33309
(800) 422-9323
(305) 537-9323

Florida Video Systems
14422 NW 7th Ave.
Miami, FL 33168
(305) 688-6618

Galjour Electronics Corp.
dba Crescent
2744 Marietta St., Suite 2
Kenner, LA 70062
(504) 466-4454

Gendra Broadcasting Corp.
2800 Biscayne Blvd., Suite 700
Miami, FL 33137
(305) 372-8845

H. B. Centennial
2500 NW 39th St.
Miami, FL 33142
(305) 633-2200

Long Communications
Group, Inc.
96 Burke St.
Winston-Salem, NC
27101
(919) 725-2306

Mission Service Supply
Drawer 2957
900 Wood St.
W. Monroe, LA 71294
(318) 325-8674

Professional
Communication Systems
5426 Beaumont Center
Blvd. #35
Tampa, FL 33634
(813) 888-5353

Showcase Inc.
2323 Cheshire Bridge
Rd. NE
Atlanta, GA 30324
(404) 325-7676

Sports-Tech
International, Inc.
6300 N.W. 5th Way, Ste
150
Ft. Lauderdale, FL
33309
(305) 772-9155

Technical Video
Systems, Inc.
215 N. Broad St.
Winston-Salem, NC
27101
(910) 748-0916

Total Audio Visual
Services
811 Marietta St.
Atlanta, GA 30318
(404) 975-7555

Video Production
Systems, Inc.
8875 N.W. 23rd St.
Miami, FL 33172
(800) 666-1699

W.H. Platts Co.
234 Meacham St.
Charlotte, NC 28203
(704) 332-9053

Whitlock Computer Co.
4120 Cox Rd.
Glen Allen, VA 23060
(800) 745-9201

Kregel - continued from page 14

Acquisition lends itself to tape (either analog or digital tape), editing can go either way (tape or disk, linear or nonlinear) and distribution like acquisition also lends itself primarily to tape (be it VHS or 1" Type C). If you are currently considering buying a video camera and building an editing suite, is at least one tape deck in your future? It probably is.

In next month's article we will continue our look at this topic (specifically comparing analog to digital tape systems), and we will continue to address the following question. If the new digital nonlinear editing systems are so "good", and analog is a thing of the "past", then why is most every nonlinear system marketed today still trying to reach the so called "BetaCamSP and MII" level of signal quality? More next month.

Note 1: 67,693 mm/sec divided by 25.4 mm/inch equals 2.6 in/sec. 2.6 in/sec multiplied by 60 seconds equals 156 inches per minute. 156 in/min multiplied by 60 minutes equals 9,360 inches per hour. 9,360 in/hr divided by 12 equals 780 feet of tape on an M60L. 9,360 inches on the tape divided by 2 (tape is 1/2 inch wide) equals 4680 square inches of surface area for the entire tape. 4680 square inches divided by 144 (square inches per square foot) equals 32.5 square feet of surface area for the entire tape (single side of tape). A 4' by 8' sheet of plywood is 32 square feet.

Note 2: CCIR-601 calls for a digital screen size on the order of 720 by 484 pixels. Each pixel has RGB values (red, green, blue) 8 bit each (24 bits total). If you multiply 720 by 484 you get 348,480 which is the total number of pixels per screen. 348,480 multiplied by 24 bits (bits per pixel) equals 8,363,520 bits per screen. There are 30 screens (frames per second) so 8,363,520 multiplied by 30 (equals 250,905,600) is the total number of bits per second. 8 bits equals a byte so 250,905,600 divided by 8 equals 31,363,200 or 31.3 Mbytes/sec. for 720 by 484 eight bit uncompressed. 640 by 480 uncompressed comes out to 27.6 Mbytes/second, and some HDTV systems are on the order of 100 plus Mbytes/second. HDTV is going to bring a whole new level to storage and compression problems and will likely ensure the use of tape (bulk storage) for decades.

BetaCamSP, SVHS, D-1, D-5, Avid, Ikegami, Toy Story, CamCutter are property of their respective owners.

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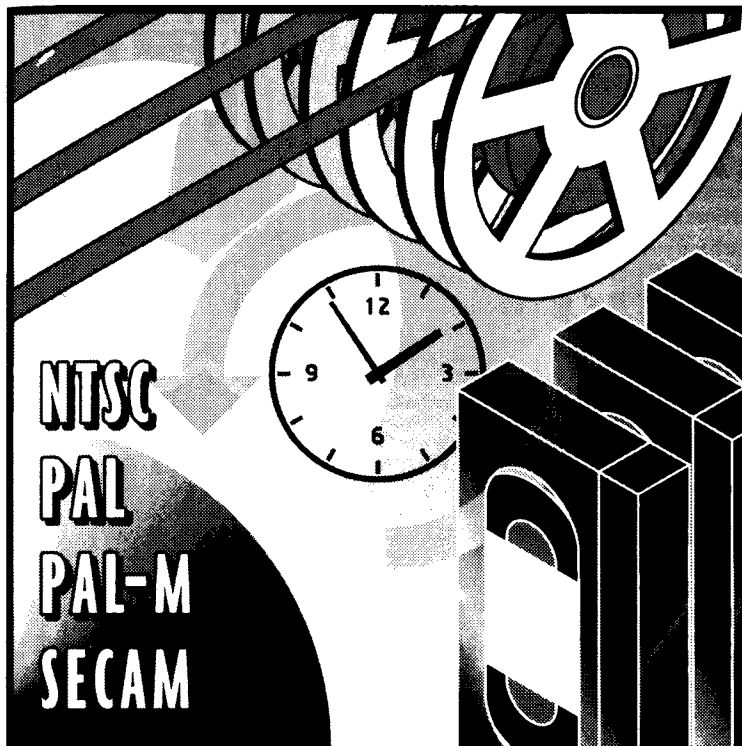
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Wanted: AU-TB50, AU-66 Studio Deck. Cash. Call Kevin at (310) 281-7599.

Wanted: Used MII Tapes. Any length. Contact Jamie Dotson. (800)842-4273. 1/95

Wanted: Panasonic AU-550 Field MII editing VCRs. Any condition.

Spare Parts Inventory for AU-550, especially printed circuit boards. Contact Jonathan Meyers at (612) 642 4637. 12/94

Wanted: PC video card that will render *.TGA files at NTSC 720 x 486 resolution or greater. Needs Component or RGB outputs. Call Gary Dansie, Options Inc. (801) 467-7421. 11/94.

Wanted: Amiga 2000/2500. Need CPU, will consider some extras-cheap. Also want rear-screen fabric or panel, 4'x6' or larger; Panasonic interfaces for Ives II. Contact Steve Braker at (608) 251-8855.

Wanted: MII player and Sony 5850 recorder. Call Peter at (818) 888-8673.

Wanted: Alamar 1055 and SC 2000's, used or new, Call John Bishop (704) 398-0046.

Wanted: Amiga Computers & related hardware, as well as used working prosumet video equipment. Copperhead Technologies. (518) 346-3894.

Equipment for Sale

Panasonic MII AU 650s, AU 500s, AU 400s, cameras, tripods, lights, waveforms, vectorscopes, etc. Call Lenny at (803) 762-0719 for a detailed listing.

JVC BR-S 525U with DNR and time code, excellent condition. MII or Beta out of TBC. First rate slow motion, perfect for interformat editing. \$5,250. Call Mike at (970) 484-5535.

Panasonic AU500, B stock 2 1/2 years ago, very good condition \$5500. Call Tom Miller (406) 222-6733.

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AU-410 Dockable MII Recorder. 300 hours, excellent condition, \$4,000 or best offer. **AU65H Dockable MII Recorder,** 15 hours exel. cond. \$5,000 or best offer. **AU 55H 90 min Portable MII Recorder Player,** time code, TBC, \$6,000 firm. Contact Eric Ortlieb (714) 362-9737.

AU 520S, low hours, excellent condition, all mods, just gone through by Specialized Communication. \$5,200 firm. Also have Sony VO-8000, and VO- 9800 for sale. Call Peter at

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Hurita BSG-50 Black-burst/Sync generator w power supply. \$75 or best offer. **Hurita TG-50 Time-code reader/generator (LTC)** w power supply \$75 or best offer. Contact An Jones at Vena Vision Productions (817) 322-9205, e-mail on CompuServe user ID 75136.3703 or internet e-mail 75136.3703@compuserve.com

JVC KR-M820U Editing Recorder with built-in AB roll controller. Unit is clean and exceptionally good condition. Low hours on new heads. Will include extender board and component input cable. \$3000. or best offer. Contact Louis Asbury at Southern Video Corp. (704) 333-5454.

IVT-7 TBC, Like new condition, rack mounts, manual, Y/C and composite INs and OUTs, freeze frame and freeze field, black burst, fullproc amp, 1 rack unit, \$995. **Panasonic AG-A800 Edit Controller.** RS422 serial control, A/B roll plus control GVG 100 and other switchers. CPU and operation control panel. \$2950 or best offer. Call Burt at (941) 921-5992.

Portable MII Panasonic AU-520, like new, low hours, portable case, with AC power supply, no batteries. \$6,200. Contact Alec or Bob (316) 687-6136.

Hitachi Z-One B dockable camera with Fujinon lens. \$5,100. **Sony SEG 2550 8 input video switcher,** \$2,200. **2 Anvil cases 14W x 12H x 33L,** \$300 ea. Call Karl Schmidt at Bristol Productions (360) 654-4260.

Distress Sale. Must Sell. MII Camcorder System- NEC 3 chip camera (similar to Sony BVP30) docked to AU-400, under 400 hours use, 2 lenses: Canon Pegasus 15xCCD lens and Fujinon wide angle zoom lens. 5 Anton Bauer Bricks (3 new) Anton Bauer Life-Saver Charger, Tiffin filters, wedge plate, new MII tapes, Port-A-Brace carry case, all manuals. Great system, \$6,000. **AU-500 Portable,** low hours, exc cond. all mods, complete manuals, Port-A-Brace case, AC supply, 7 BP-90 batteries and pro 500 4-position charger. \$3,000. **Alta Pixis Effects** \$250. **Convergence ECS-204** with type 5 interfaces, manuals, exc. cond. \$400. **JVC S-VHS Pro Camcorder BY IOU** chip camera and

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Panasonic MII Demo Equip, MII Camera System includes: WVF700MH Camera Head, AU410 Dockable Recorder (50 hrs on head), AGB745 Battery Charger, AUBP220V Batter Pack, WVDKT700M Docking Kit, WVCB700 Camera Remote Control, WV750 ENG Kit for F700 \$14,600. **AU63 MII Studio Player,** 220 hours power, 50 hours drum \$9500. **AU65 MII Studio Recorder,** 310 hrs power, 80hrs drum, \$9,000. **AG7650 S-VHS VCR,** new \$3420. **AGA770 Edit Controller,** new \$1925. **BTD1910Y 19" Color Monitor** \$1400. **BTH1360Y 13" Color Monitor** \$800. **Anton Bauer Demo Equipment:** MP4-D Battery Charger \$1576, DM-4 Discharge Module \$303, QRPAN-AQ Battery Mount Plate \$93 **Toshiba Demo Equipment:** TSC100 Hi-8 Camera \$6500, BBC10 Battery Charger \$345, BNP10 Battery \$50. All Offers Considered. All equipment has new equipment warranty. Call Paul Cantrell (505) 523-7788.

VLAN/AmiLink Pro A/B-roll VT 4000 edit controller w/software. External "black-box" configuration w/1 transmitter and 3 receivers. Hardware will work on "any" computer system serial port and appropriate software (Oz, Genie, Post, etc.). Included AmiLink Pro Software works with the Amiga Video Toaster 4000. Nodes configured for Panasonic MII equipment, easily configured for other serial VTR's. Zero frame accurate, automatically controls the Toaster, supports Dynamic (Auto) Tracking

VTR's. Superb EDL management. All manuals, power supplies, and cables included and shipped in original packaging. Asking \$1,600, no reasonable offer refused. **Horita BSG-50 Blackburst/Sync Generator w/power supply.** \$75.00 or best offer. **Horita TG-50 Time-code reader/generator (LTC) w/power supply.** \$75.00 or best offer. Contact Ann Jones at VenaVision Productions (817) 322-9205, or via e-mail on CompuServe (User ID is 75136,3703). Internet e-mail address is 75136.3703@comuserve.com

Portable MII Panasonic AU-520. Bought B-stock for \$8,200 -- selling for \$5,000 or best offer.. Fully tested, and in MINT **CONDITION!! Pro-portabrace case, two batteries plus AC/DC converter-recharger additional \$600.** Must sell as unit. Total \$5,500 + shipping, or best offer. Call Tom Miller at (406) 222-6733.

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Portable MII Panasonic AU-520 like new, approx. 25 hours, includes Portabrace bag and service manuals, batteries not included \$4,000. (originally \$9,700). Contact Tom Kelly (714) 754-1273.

Alta Pictoris 2D DVE (Foreground modified '92 for cleaner picture). Smooth compression with variable border width and color, posterization, solarization, invert vertical and horizontal, mosaic, 2y/c inputs (foreground and background). Y/C output. Built-in keyer, GPI trigger, 5 effect memories. \$2000. **1990 Sierra Video Systems CIK-1 Component (Y, R-Y, B-Y) Mixer Keyer** with fade to Black or Color, GPI trigger, variable speed transition, super clean. \$2000. **Toaster 4000 with Amiga 4000/040 computer w/18 mg of ram,** 120 mg Seagate hd and 1.1 gig Micropolis hd, and Sunrize AD516 stereo digital (internal 8 track) audio card. \$5000. Please call (800) 315-7452 for more details. Terry Grant. Grant Booker Video Company Inc.

1 WV-F500/AU45H, 1 WV-F565/AU45H, 1AU45H, 1 AUW 32H, 1 AUW 33H, 1 AUW 35H, 1 WV VT 15 MII Adaptor Newer Pan Cameras, 1 WV VT 10M MII Adaptor 200-300 c/e. All units likewen, factory full warranty. Big Savings. Call for Jim or Don at Tri-State Video (412) 898-1650.

AU-400 MII Field Recorder, \$2500. AU-650 MII Studio Recorder Slow Motion, Full Editing, Built in TBC, \$7500. AU-660 MII Studio Recorder Slow Motion, Full Editing, Advanced 9 Bit Tbc, \$9000. All equipment carries a full 90 day warranty. Call (301) 790-0103.

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Panasonic F500/8U45 MII Camcorder. \$10,500. Call Robert D. Legum (301) 340-9566 at Image Solution.

Grass Valley model 100 switcher, Sony BVE-900 edit controller. Price is \$8,000.00. Excellent condition. Call Brian Barkley at (913) 681-1080.

WV-F500 Digital Camera docked to AU-410 MII recorder. Low hours with 2 Anton Bauer Digital Propac Batteries and charger. Bogen 3066 fluid head tri-pod, \$13,500.00.

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Ampex ADO-1-- DVE 3D Option & Upgrade Software, \$15,000. **O'Conner 50 Fluid Head Tripod w/ spreaders,** \$875.

JVC KM-2000 Switcher, \$875. Barco Graphics Data Projector, scans to 70Khz,

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AU-4-- MII Field Recorder, \$2500. AU-650 MII Studio Recorder, slow motion, full editing, built in TBC, \$7500. **AU-660 MII Studio Recorder,** slow motion, full editing, advanced 9 bit TBC, \$9000. All equipment carries a full 90 day warranty. Call (301) 790-0103.

AU-62H, AU-63, AU-65 all with TC option. Excellent condition. Fully Operational. B/O. Please call Murray at (210) 692-1776.

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Panasonic AU55H MII field recorder/editor. Practically brand new, less than 75 hours of use. Never left the studio, barely used. Spotless i original box with AUB 110 power supply. Works flawlessly, beautiful picture and sound. \$10,000 make offer, quick cash carries weight. Contact Geltner at Stuart Geltner Media 100 Editing Services, (505) 820-0696.

Amiga A2000 Computer, Kickstart 1.3, 1 low density floppy disk drive, i meg chip ram, keyboard & mouse. Upgrades available. \$400.00. **Amiga A500 Computer.** New in factory sealed case, Rev. 6.0 motherboard, 8372A 1 Mes Angus, Kickstart 1.3, mouse keyboard, power supply docs/disks. **Amiga A2065 Computer. Commodore. A2065 Ethernet Networking cards for A2000/3000/4000 Systems.** \$189. Call Bill Tucker at (518) 346-3894.

AU - 660 Recorder/Player , \$3100. TM-90U Color Monitor 2 channel w/ multi pin RGB input, \$200. Contact Dan Hall at Video Management Systems. (317) 841-1212

3 New 90 min MII tapes. \$30 each, 15 Used tapes with low passes and factory cases- \$10 each. Contact Wiltz Wagner at (317) 274-1436.

JVC, BR-S777V, S-VHS, VHS, Three-In-One Duplicator with RM-7030 Remote Control and Rack Mount Hardware. Very Low Hours. Mint Condition. \$2,995 including shipping. Call Doris (516) 285-7146.

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TAO Editiaer 3.1 A/B Controller. Works on any PC or better. Works with professional & pro summer decks. Generates & reads SMPTE time code. Controls Toaster, MX50, ALaden, and many more switchers. 7 GPI. EDL management, creates logs, time line, or edit on

the fly. Much more. \$1500.00. Hawaiian Image Video Productions. Ron Darby (808) 531-5474.

Grass Valley Mod 1600-LX Switcher. \$2700. Very good condition. Comes with very long snake for remote mounting. Brian at (716) 654-6710.

AU-62H Player, AU-63 Player w/Dynamic Tracking QU-65 Recorder/Player, AU-55H Portable Recorder, JVC KY-27 Camera (Includes: Fujimon 16:1 Lens, MII Back, Studio Kit, JVC RMP-2000 Remote Control, Cables, 8 Batteries, Charger/AC Adapter Bogen Tripod and Plate). All equipment in excellent condition and priced to sell. Please call Digital Arts (210) 692-1776.

JVC KRM-800U Edit Recorder, \$2900. Or trade JVC-BRS-811U Edit Recorder/SAF-911. JVC Editor in Good Condition. KRM-800U. Call Kevin Boland at Electric Images Video at (805) 937-3196.

AUW-32 MII Player, AU-33H MII Player w/ Dynamic Tracking, AUW-35H MII Editor. All units 'like new' from NAB Las Vegas Show. Also, AU-45H MII Dockable Recorders all at BIG SAVINGS!!! Call Jim or Don at (412) 898-1630.

Panasonic AU-410s recorder docked to Panasonic 300CLE camera, without lens, excellent condition \$6400. Call Don at (613) 821-7783.

JVC KRM 800 Editing VCR. Excellent, 400 Hour Use. New upper head with zero hours. Used as backup. No longer needed. \$3500. Bob Benson Video Film (508) 432-1200. (508) 430-1184. 3/95

Videotek Prodigy Switcher 10 input, chroma, luminance 7 DSK, & G-MEN; Magni Vectorscope" V553; Tektronics "Waveform" 528; Tektronics "Waveform" 1480R; RM-p3 Remote CCU for Sony Camera; 2 JVC TM-R14u Video Monitor 14" with underscan, blue, B minus color, A/B, RGB; 2 Panasonic WV 5350 B/W Monitors in Dual Mount Tray; O'Connor Model 30B tripod hd; ALR Computer

386/4MG RAM/300HD; NEC Multisync 2A Color Computer Monitor; (2) Spool of RG/SQU Coax (1000 ft. ea.); Custom Console 5 Bay with area; (2) Electro Voice Sentry 100A Studio Monitors w/wall brackets; Leader 5860 C Waveform Monitor (NTSC); Leader 5860 C Vectorscope (NTSC); AVL Data Booster Isolator (4); AVL Power Control; Barco RGB Distribution Amp with Sync; Ace Component Converter ASC200/732-732-731 Cards; Videotek VSC-21 Signal Generator; Chyron ACG 4mg/20HD
Contact Dan Hall at Video Management Systems. (317) 841-1212

Studio Equipment, Almost New: Alesis ADAT Digital 8 track recorder, \$2,350, NC Cooper Data Sync \$100. Panasonic AU-w-35H MII component recorder, \$7,000. Panasonic DS-850 SVHS edit deck w slow mo \$5,000. Panasonic AG DP-800 SVHS camcorder w/ Anton Bauer battery pack & charger, 14x lens, Tiffen filters, Series 9 adapter, lens hood, \$6,500. Panasonic F-700 camera package w Cannon 17x lens, viewfinder, tri-pod plate, hardshell case, MII docking adapter \$6,500. Buy all and save or piece equipment. Everything low hours & less than 1 year old. Contact Jay, (510) 9443 or 213-8966.

Facilities/Suites

MII A/B/C Roll Full Component Suite W/MATROX: Panasonic AU-65 MII edit/recorder w/TC, AU-63 & AU-62 edit source w/TC, Matrox Studio Post Production System w/ Titania 3-D DVE, ALR EISA 486-33, 17" svga monitor, Sony LVR-5000A CRV laser signal processor & recorder/player, Sony VP-9000 SP 3/4" player, Sony VO 7600 VCR, Panasonic AG-7750 S-VHS edit/recorder w/TBC, Panasonic AG-WI standards converter, 2 Sony PVM-1342Q monitor, Nigel B Senior workstation; INCLUDING SOUND SUITE: Soundcraft Delta Ave Audio Mixer w/1 master RS-5059, 4 D221 RS 1443, 4 D203 RS1443, master RS 5061, Stantron turret desk, Tascam MSR-16S w/Dolby, Tascam RC-416 remote, Adam Smith Zeta 3 A/V Midi; ALSO

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- Alladin Graphic picons and Effect picons displayed on the MVS duo screen for ease of access and recall
- All Alladin information stored in the MVS duo EDL for recall
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INCLUDING MII FULL COMPONENT CAMERA EQUIPMENT: Panasonic WV-F700MH digital 3 chip camera w/Canon J15x9.5 BRSII Zoom, Panasonic DKT700M MII docking kit, Panasonic AU-410 docking MII recorder, Sony PVM-8044Q component 8" monitor w/batteries, O'Conner Series 55 tripod system, Lowell lighting systems, INMACS UPS 1200 and Fortress 2KVA UPS, and more. Asking \$70,000, or take over leases at approx. \$4500/mo. for 14/18 mos. Buyer pays shipping. Please call Richard or Michael at (310) 696-1046

MII A/B ROLL FULL COMPONENT EDIT SUITE, includes: (1) Panasonic AU-60 MII edit/recorders w/ TC, (1) JVC KR-M820U MII edit/recorder, (1) JVC CR-M850U 3/4 edit/recorder, Paltex Europa Edit Controller 7 status monitor, JVC KM 3000 Seg/switcheer, Microtime Genesis Act1 DVE, (1) JVC KM-F250 TBC, Laird 1500 Character Generator, Lenco RGB-Composite Encoder, Panasonic BT M1310Y monitor, Sigma CSG-460 Sync Generator, Sigma SVC-213 Routing Switching, Winstead 5 bay rack mounts. Full Documentation included. \$39,000. *May consider pricing out.* All well maintained. Buyer pays all shipping. Contact Jodi Heurung, (612) 935-0033.

A/B ROLL EDIT Suite, includes (2) Panasonic AU-65's Edit Recorders, (1) AU-63 slo-mo player, (1) Panasonic AG-7750 SVHS Edit recorder, Alta Pegesus switcher, For-A 3000 3D DVE, Inscribe CG package w/ 486DX2-66 PC, Editing Technologies "CMX style" editor w/ serial control, Tascam 688 midi studio 8-track cassette, audio router and mixer, System wired Y/C, all cables furn., system is working and producing programs daily. Asking \$39,000. **Panasonic 300 CLE camera** w/ full studio kit, \$3,500. **Panasonic AU-400 MII dockable recorder** w/ VT-10 docking adapter for 300CLE camera, \$3000. ITE-40 tripod, \$300. Call Vin Sisson at (216) 527-2182

Tapes

3M New MII Videotapes- Length 10 min./Price \$22.25/Quantity 25; 20 min./\$25.75/30; 30 min., \$29.69/34; 60 min./\$44.49/25 90 min. \$66.79/11. All sales final. All sales final, equipment purchased "as is".

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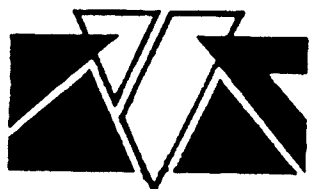
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Send resumes and sample tapes to the Association. Please state which position you are interested in.

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Trading Post classified ads will remain free to MII User Association members. However due to rising printing costs, we can no longer run these ads indefinitely. Beginning next month, ads will be deleted after three months unless we receive a request for continuation. To continue your ad, simply mail or fax a copy of the Trading Post page with your ad circled. Write "reprint" in the page margin.



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The MII Advantage

- 1) **Proven.** MII is an established and proven 1/2" format. With over 25,000 MII units delivered to market, MII is here to stay. NBC alone has over 1,100 units in service. Additionally MII international acceptance includes: Thames (England), ORF (Austria), NHK (Japan), KBS (Korea), NOS (Holland). Domestically, the list of MII users is impressive since many large group owners have adopted MII as their format of choice for acquisition, production and airing. A small sampling of these is: Scripts Howard, Knight Ridder, Media General, TV Chronicle, Gannett, Koplar, and Guy Gannett Broadcasting Services.
- 2) **Convenience.** MII uses a much smaller tape cassette than Beta SP (both size cassettes), therefore less storage space is required for 60 and 90 minute tapes. Also, the 20 minute small cassette is easier to handle in the field. MII tape is available from Panasonic, Fuji, and Maxell.
- 3) **Durability.** MII employs a more rugged and durable construction as compared to Betacam SP. MII's transport base (Chassis) is heavier and more rugged. Reel drive motors are rigidly mounted to the transport assembly and do not have to move at all to accommodate different size cassettes. On Beta SP units the reel motors are repositioned when you go from one cassette size to another. This movement of the reel motors creates another area for mechanical failure.
- 4) **Longer Head Life.** MII has a significantly longer head life cycle than Beta SP products. Typical MII head life is between 2000 to 3000 hours. Betacam SP is between 500 to 1500 hours. This is exacerbated by switching between metal particle and metal oxide tapes.
- 5) The MII recording system employs a 2.25MHz analog burst signal inserted in front of both compressed chrome components (luminance also). This 2.25 MHz signal is used as a phase and timing reference when the composite signal is recreated. This enhances the quality of the video output, improves multiple generations, and reduces the velocity errors effects along the TV line.
- 6) **Compatibility with digital.** In the MII system, the TBC uses a digital sampling rate of 13.5 MHz, which is compatible with the CCIR digital sampling rate of 27 MHz.
- 7) **90 Minute Expertise.** For many years, the MII format was the only one that was capable of recording 90 minutes in the field. Sony has recently introduced a new portable that now records 90 minutes, but its cost is approximately 45% greater than the AU-520.
- 8) **Direct Drive Motors -- Standard.** All MII VTRs utilize direct drive motors. Betacam SP uses these direct drive motors only in the studio machine.
- 9) **Precise and Gentler Tape Handling.** All the posts used in the MII tape transport system have ball bearings. This is not the case with Beta SP. This results in a more precise and gentler tape handling.
- 10) **Less wear and abrasion.** The MII system users ceramic edged guideposts, despite their comparatively higher cost, to resist abrasion and wear caused by the tape edges. This type of wear will affect interchangeability. This is especially important in the use of metal particle tape which can cause more severe wear than Oxide formulation. There are no ceramic posts used in the Beta SP format.
- 11) **Closed tension control.** Closed tension control in both the supply and the take-up sides of the tape transport. Applied to both the supply reel and the take-up reel, a stable tension control is achieved not only in play mode, but in FF., REW, Slow and Still modes as well. Beta SP provides controls only on the supply reel.
- 12) **Better Portability.** MII portable VTRs use the same type of control method that the Beta SP machines use, namely the supply side. Conversely, the Beta SP portables use the brake band method that is found in many ordinary consumer type VCRs. This is subject to fluctuations in tape tension caused by time, environmental factors as well as simple wear.

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